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09/950,023	09/12/2001	Kaj Jansen	017.40109X00	1702

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EXAMINER	
NGUYEN, DUNG X	

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/950,023	JANSEN ET AL.	
	Examiner	Art Unit	
	Dung X Nguyen	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 6, 8, 34, 35, 37, and 38* is/are rejected.

7)☒ Claim(s) *7, 9 - 33, 36, and 39 - 57* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *06/05/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> *(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.*

2. **Claims 1, 2, 34, and 35 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Kumura (US patent application publication # 2003/0147456 A1), and further in view of Sato (US patent # 6,778,591 B2)

Regarding claim 1, Kumura discloses:

- Demodulating a first and second complex sequences to produce demodulated complex first and second sequences (page 4, second column, paragraph 0045);
- Detecting the demodulated first and second complex sequences to produce detected complex first and second sequences by multiplying (complex multiplier 3 of figure 5) respectively the demodulated first and second complex sequences with complex conjugates thereof (page 4, first column, paragraph 0044 to second column, paragraph 0046).

Kumura differs from the instant claimed invention that it does not show the steps of:

- Averaging a function of the complex detected first and second sequences to produce an average function; and

- Processing the average function to detect a time, relative to a time reference, of at least one peak therein resultant from the transmission of the first and second complex sequences

However, Sato discloses (figure 2, column 1, lines 17 – 55, and column 3, line 63 to column 4, line 9):

- Averaging unit (205) performs a function of the complex detected first and second sequences to produce an average function; and
- Processing the average function to detect a time, relative to a time reference, of at least one peak therein resultant from the transmission of the first and second complex sequences from units 204_1, 204_2.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Kumura and Sato as providing the requirements of the instant claimed invention for accuracy necessarily detecting of a path timing (abstract of Sato).

Regarding claim 2, as followed by the limitations analyzed in claim 1, Sato further discloses:

- The mobile device comprises a RAKE receiver; and
- The time of the at least one peak is used to set fingers in the RAKE receiver within the mobile device (column 8, line 65 to column 9, line 7).

Regarding claim 34, the limitations are analyzed in the same manner set forth as claim 1.

Regarding claim 35, as followed by the limitations analyzed in claim 34, the limitation are analyzed in the same manner set forth as claim 2.

3. **Claim 3, 8, 37, and 38 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Kumura (US patent application publication # 2003/0147456 A1), Sato (US patent # 6,778,591 B2), and further in view of Arimitsu (US patent application publication # 2003/0123407).

Regarding claim 3, as followed by the limitations analyzed in claim 1, Sato further discloses:

- The system is a cellular system having a plurality of base stations at which the transmitters are located which transmit the first and second complex sequences, a power level of the peaks is detected by the mobile device and the power level of the peaks is transmitted to the system (column 1, lines 11 – 55).

Kumura and Sato differ from the instant claimed invention that they do not show the step of the system, in response to the power level, controls handoff of transmissions to the mobile device from one transmitter to another transmitter in the system.

However, Arimitsu discloses the step of the system, in response to the power level, controls handoff of transmissions to the mobile device from one transmitter to another transmitter in the system (page 2, second column, paragraph 0035 and page 1, first column, paragraph 0005).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Kumura, Sato, and Arimitsu as providing the requirements of the instant claimed invention for increasing the flexibly power transmission controller (abstract and page 2, paragraph 0030 of Arimitsu).

Regarding claim 8, as followed by the limitations analyzed in claim 2, the limitation are analyzed in the same manner set forth as claim 3.

Regarding claim 37, as followed by the limitations analyzed in claim 34, the limitation are analyzed in the same manner set forth as claim 3.

Regarding claim 38, as followed by the limitations analyzed in claim 35, the limitation are analyzed in the same manner set forth as claim 3.

4. **Claims 4 and 5 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Kumura (US patent application publication # 2003/0147456 A1), Sato (US patent # 6,778,591 B2), and further in view of Barroso (US patent # 6,389,003 B1).

Regarding claim 4, as followed by the limitations analyzed in claim 1, Kumura and Sato differ from the instant claimed invention that they do not show the step of wherein the averaging a function of the detected complex first and second sequences to produce the averaged function comprising:

- Performing a first averaging which averages the detected complex first and second sequences to produce complex averages thereof;
- Detecting a magnitude of the complex averages;
- Performing a second averaging of the magnitude of the complex averages to produce a real average; and wherein

The processing of the average function is performed on the real average.

However, Barroso discloses the step of wherein the averaging a function of the detected complex first and second sequences to produce the averaged function comprising:

- Performing a first averaging which averages the detected complex first and second sequences to produce complex averages thereof;
- Detecting a magnitude of the complex averages;
- Performing a second averaging of the magnitude of the complex averages to produce a real average; and wherein

The processing of the average function is performed on the real average.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Kumura, Sato, and Barroso as providing the requirements of the instant claimed invention accuracy necessarily detecting of a path timing (abstract of Sato).

Regarding claim 5, as followed by the limitations analyzed in claim 2, the limitation are analyzed in the same manner set forth as claim 4.

5. **Claim 6 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Kumura (US patent application publication # 2003/0147456 A1), Sato (US patent # 6,778,591 B2), Arimitsu (US patent application publication # 2003/0123407), and further in view of Barroso (US patent # 6,389,003 B1).

Regarding claim 6, as followed by the limitations analyzed in claim 3, Kumura, Sato, and Arimitsu differ from the instant claimed invention that they do not show the step of wherein the averaging a function of the detected complex first and second sequences to produce the averaged function comprising:

- Performing a first averaging which averages the detected complex first and second sequences to produce complex averages thereof;
- Detecting a magnitude of the complex averages;
- Performing a second averaging of the magnitude of the complex averages to produce a real average; and wherein

The processing of the average function is performed on the real average.

However, Barroso discloses the step of wherein the averaging a function of the detected complex first and second sequences to produce the averaged function comprising:

- Performing a first averaging which averages the detected complex first and second sequences to produce complex averages thereof;
- Detecting a magnitude of the complex averages;
- Performing a second averaging of the magnitude of the complex averages to produce a real average; and wherein

The processing of the average function is performed on the real average.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Kumura, Sato, Arimitsu, and Barroso as providing the

requirements of the instant claimed invention accuracy necessarily detecting of a path timing (abstract of Sato).

Allowable Subject Matter

6. **Claims 7, 9 – 33, 36, and 39 – 57 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Butler et al. (US patent # 6,680,727 B2) discloses a method and its corresponding apparatus for canceling pilot interference in a CDMA communication system.

Saito et al. (US patent # 6,510,187 B2) discloses a mobile radio terminal and automatic frequency control.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung X. Nguyen whose telephone number is (571) 272-3010. The examiner can normally be reached on Monday through Friday from 8:00 AM to 17:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Ghayour H. Mohammad can be reached on (571) 272-3021. The fax phone numbers for this group is (571) 273-3021.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

DXN
February 24, 2005

M. G

MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER